5. (Original) The power control system of claim 4, wherein the adjustable buck voltage converter reduces supply current to the power amplifier until saturation of the power amplifier is detected.

6. (Original) The power control system of claim 1, wherein the secondary control signal is used to control the variable attenuator to reduce attenuation in the first power control loop, and further comprising:

an adjustable buck voltage converter responsive to the secondary control signal, the adjustable buck voltage converter configured to reduce the power supplied to the power amplifier in response to the secondary control signal until saturation of the power amplifier is detected.

7. (Currently amended) A method for operating a power control loop for a power amplifier, comprising:

measuring a power level of a signal output from the power amplifier;

generating an error signal by comparing the power level of the signal output from the power amplifier to a first reference signal;

generating a primary control signal responsive to the error signal in a primary control loop; ~~and~~

deriving a secondary control signal responsive to the error signal and a second reference signal, and using the secondary control signal to control a gain applied to the signal output from the amplifier.

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8. (Original) The method of claim 7, further comprising:

using the secondary control signal ~~to control~~ a gain applied to the signal output from the power amplifier.

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9. (Original) The method of claim ~~8~~, wherein the gain applied to the signal output from the power amplifier is controlled by a variable attenuator, the variable attenuator configured to receive the signal output from the power amplifier.

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10. (Original) The method of claim 7, further comprising:

using the secondary control signal to control an adjustable buck voltage converter, the adjustable buck voltage converter configured to provide a supply current to the power amplifier.

11. (Original) The method of claim 10, wherein the adjustable buck voltage converter reduces supply current to the power amplifier until saturation of the power amplifier is detected.

12. (Original) The method of claim 7, further comprising:

using the secondary control signal to control a gain applied to the signal output from the power amplifier; and

using the secondary control signal to control an adjustable buck voltage converter, the adjustable buck voltage converter configured to provide a supply current to the power amplifier, wherein the adjustable buck voltage converter reduces supply current to the power amplifier until saturation of the power amplifier is detected.

13. (Currently amended) A system for operating a power control loop for a power amplifier, comprising:

means for measuring a power level of a signal output from the power amplifier;

means for generating an error signal by comparing the power level of the signal output from the power amplifier to a first reference signal;

means for generating a primary control signal responsive to the error signal in a primary control loop; ~~and~~

means for deriving a secondary control signal responsive to the error signal and a second reference signal, and

means for using the secondary control signal to control a gain applied to the signal output from the amplifier.

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14. (Original) The system of claim 13, further comprising:

means for using the secondary control signal to control a gain applied to the signal output from the power amplifier.

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15. (Original) The system of claim ~~14~~, wherein the gain applied to the signal output from the power amplifier is controlled by a variable attenuator means, the variable attenuator means for receiving the signal output from the power amplifier.

16. (Original) The system of claim 13, further comprising:

means for using the secondary control signal to control an adjustable buck voltage converter means, the adjustable buck voltage converter means for providing a supply current to the power amplifier.

17. (Original) The system of claim 16, wherein the adjustable buck voltage converter means reduces supply current to the power amplifier until saturation of the power amplifier is detected.

18. (Original) The system of claim 13, further comprising:

means for using the secondary control signal to control a gain applied to the signal output from the power amplifier; and

means for using the secondary control signal to control an adjustable buck voltage converter means, the adjustable buck voltage converter means for providing a supply current to the power amplifier, wherein the adjustable buck voltage converter means reduces supply current to the power amplifier until saturation of the power amplifier is detected.